

7UXVW 5HSXWDWL R K D D Q R U % L O G V W Q O L \ P S O F W L

/HVOH\ &KLRX
'HSDUWPHQW RI (FRQRPLFV
2FFLGHQWDO &ROOHJH
/RV \$QJHOHV &\$ 86\$

-HQQLIHU 3DWH
'HSDUWPHQW RI (FRQRPLFV
/R\ROD ODU\PRXQW 8QLYHUVLW\
/08 'ULYH 6XLWH
/RV \$QJHOHV &\$ 86\$
MHQQLIHU SDWH#OPX HGX

:H XVH WUDQVDFWLRQV IURP D GLVWVWHFWLYH RQOLQH
DXFWLRQV WR H[DPLQH WKH UROHVWELDG LWLQJ XVW SOD\
EHKDYLURU ZKHQ WKH H[DFW FKDUDFWHULWLFV RI D
SXUSRVHIXOO\ FRQFHDOHG IURP EX\HUVDOOH VKRZ WKD
WUXVWLQJ RI VHOOHU FODLPV LQ RQOLQH WDLRQVDFW
EHFRPHV VLJQLILFDQWO\ PRUH LPSREUDQMLWR EX\HUV
ELGV ZKHQ WKH TXDOLW\ RU YDORJHILQJWKH JRRG LV
FDQ EH H[WUDSRQDWRHGGWIR FRQRPLFUGGPEQLFDWLRQ
EHKDYLURU LPSDFWHG E\ WUXVW VXFHDEMLGGUQQDQFLDQ
PD\ OHDG WR SULFH EXEEOHV

.H\ZRUGV H FRPPHUFH DXFWLRQV HSLXWDFWDLRQV ILQDQFLD

6XEMHFW FODVVLILFDWLRQ FRGHV / / '

&RUUHVSRRGLQJ DXWKRU

P\VWHU\ DXFWLRQV VHOOHUV ZLWKS HUFHQW JSUWLPYHX B DRQL

)LJXUH 6XPPDU\ RI FRPSOHWHG P\VWHU\ JLIW FDUG D

&RPSDULQJ WKH VDOH SULFHV ~~Q~~RR WPHOHV LFRQJ LLQX P
)LJXUH VXJJHVWV WKDW KRQHVV ~~N~~HSOHFMUHG ZHRXWGL QJW HLO
PDUN ~~PKH~~ UHSXWDWLRQ V\VWHP RQ H% ~~DXOZHQWGVHVQ~~ ~~Q~~ ~~Q~~ ~~H~~ ~~H~~ ~~G~~ ~~V~~ ~~R~~
DOORZLQJ EX\HUV WR OHDYH SRVLWRV ~~HD~~ ~~Q~~ ~~L~~ ~~H~~ ~~J~~ ~~H~~ ~~Q~~ ~~V~~ ~~W~~ ~~Y~~ ~~H~~ ~~D~~ ~~Q~~ ~~M~~ ~~D~~ ~~Q~~ ~~M~~
\$ SRVLWLYH IHGEDFN LQFUHDVHV ~~DD~~ ~~V~~ ~~Q~~ ~~H~~ ~~O~~ ~~X~~ ~~W~~ ~~H~~ ~~U~~ ~~T~~ ~~O~~ ~~U~~ ~~D~~ ~~W~~ ~~L~~ ~~Q~~ ~~J~~ ~~E~~
ZKLFK DUH REVHUYDEOH RQ WKH VHOOHU ~~T~~ ~~V~~ ~~I~~ ~~H~~ ~~G~~ ~~E~~ ~~D~~ ~~F~~ ~~N~~ ~~S~~ ~~D~~ ~~J~~

%X\HUV DSSHU WR LQFRUSRUDW ~~G~~ ~~I~~ ~~V~~ ~~U~~ ~~H~~ ~~S~~ ~~B~~ ~~H~~ ~~W~~ ~~F~~ ~~H~~ ~~Q~~ ~~W~~ ~~R~~ ~~R~~ ~~U~~ ~~P~~ ~~D~~
DXFWLRQV HQG Z ~~W~~ ~~K~~ ~~K~~ ~~D~~ ~~D~~ ~~Z~~ ~~V~~ ~~Q~~ ~~C~~ ~~H~~ ~~L~~ ~~Q~~ ~~J~~ ~~P~~ ~~D~~ ~~K~~ ~~D~~ ~~P~~ ~~K~~ ~~P~~ ~~V~~ ~~K~~ ~~E~~ ~~C~~ ~~U~~ ~~H~~ ~~S~~ ~~B~~ ~~O~~ ~~W~~ ~~H~~ ~~G~~
VKLSSLQJ KDQGOLQJ :LQQQLQJ ELI ~~G~~ ~~P~~ ~~H~~ ~~U~~ ~~R~~ ~~M~~ ~~D~~ ~~X~~ ~~E~~ ~~M~~ ~~U~~ ~~L~~ ~~R~~ ~~Q~~ ~~O~~ ~~\~~ ~~U~~ ~~H~~ ~~S~~ ~~R~~ ~~V~~ ~~W~~
D PLQLPXP YDOXH SHUFHQW HQ ~~B~~ ~~V~~ ~~K~~ ~~M~~ ~~K~~ ~~P~~ ~~D~~ ~~Q~~ ~~Z~~ ~~I~~ ~~P~~ ~~Q~~ ~~\~~ ~~L~~ ~~Q~~ ~~J~~ ~~E~~ ~~L~~ ~~G~~ ~~V~~
UHSRUWHG YDOXH ~~R~~ ~~E~~ ~~V~~ ~~I~~ ~~Q~~ ~~F~~ ~~H~~ ~~Z~~ ~~H~~ ~~E~~ ~~F~~ ~~D~~ ~~E~~ ~~Q~~ ~~R~~ ~~W~~ ~~Q~~ ~~P~~ ~~H~~ ~~V~~ ~~P~~ ~~W~~ ~~R~~ ~~S~~ ~~I~~ ~~D~~ ~~O~~ ~~O~~ ~~W~~ ~~K~~ ~~H~~

UHPDLQLQJ DXFWLRQV PD\ KDYH HQGIGP Z P W K D D I X Q I L I Q D E L G
 KLJKHU ELG ZDV UHTXLUHG WR ZLQD W Z H H U D E X F X Q L R Q H V P D L P I D Q W
 7KH P\ VWHU\ HOHPHQW IRUFHV ELG R I H W K H W R R F W U M D W H
 EDVHG XSRQ OLPLWHG LQIRUPDWLRQ (L) R O W U B B B B W Q E R W I K
 PLQLPXP DQG PD[L P X P Y D O X H 2 I W K H W K I D X E W G R W K D W S O H
 VWULFWO\ EHWZHHQ WKH UHSRUWHG SPW X U F X W K D Q B [W B I Q W X V
 ZKLFK EX\HUV ZHLJK WKL V L Q I R U P B W L R D W Z H K F D Z L F O C L D W H S U
 LQFOXGLQJ SOXV VKLSSLQJ KDQG O P Q J L P O L F H V D E O H W Z H H Q W K

$$\text{percentage bid} = \frac{\text{price} - P_L \text{value}}{P_D \text{value} - P_L \text{value}}$$

7KH DYHUDJH ZLQQLQJ SULFH OLHV D S K S H U P [L Q I D W X H P O D Q G S H
 PD[L P X P W K X V E X \ H U V G R Q R W S O D F H P K I P J K Z O X H K W R Q W K

5HVXOWV

: H I L U V W U X Q D K H G R Q L F U H J U H V L Q J R S U I R F H V R K H D X O R W D B C

i at time W

O Price ℓ ℓ ORJ P D [O R J P L n cards ℓ no PD [ℓ no P L Q ℓ noncards

ℓ O Feedback ℓ neg X_{it} ℓ ℓ_{it}

ZK H P U D L V W K H Z L Q Q L Q J S U L F H R I W K H L D S E W J R Q Q I G O L Q Z L Q C

max LV WKH UHSRUWHG R D [L P X S P U D O X H P a r d s L P X P W K X H

QXPEHU RI FDUGV no X r s a x i R V D X G F X P R Q Y D U L D E O H W K D W H T X D

PD[L P X P Y D O X H n L n S R G W F B \ Y D U L D E O H W K D W H T X D O V R

\$OWKRXXJK ZH GR QRW REVHUYH U L E I N G S W H W I H F R Q O B V E H I [S O D E U D F O A H U Z I] Q
 H [K L E L W L Q J O R Z H U O H Y H O V R I U L V W D Y K H U I V L O R Q L Q W K D D Q U O R W Q K Z L V Q Q U Q Y H Q
 S D U W L D O O \ E \ W K H U L V N S U H I H U H Q F H V R I W K H E X \ H U V L Q W K H P D U N H

\$XFWLRQV ZKHUH WKH UHSRUWHG PLSULIPXP WKDEHQZ RZQ QRF
PLQLPXP LV UHSRUWHG

:H GRFXPHQW D QRQ OLQH DU UHODWLRQV KLS HQHWZ/HHG
RI LQIRUPDWLRQ KSERVXROG HDUWDLQ WPXP YDOXH D

&RQFOXVLRQ

0\VWHU\ DXFWLRQV SURYLGH D QRYHKOYILQYLXKQGFHQW
DV\PPHWULF LQIRUPDWLRQ +RZHYHU P HWHQXJGHW WDLQJR
EX\HUV DUH JHQHUDOO\ WUXVWLQJ BHUHQOHU FODLPV \$

5HIHUHQFHV

\$NHUORI *
0HFKDQLVP

³7KH 0DUNHW IRU D~~IE~~GRW KH 40~~DD~~UNLHW 8QFH